UNITED STATES DEPARTMENT OF AGRICULTURE.

WEATHER BUREAU.

PUBLISHED BY AUTHORITY.

FORTY-SECOND MONTHLY REPORT

OF THE

OREGON STATE WEATHER SERVICE

Report for the Month of September, 1892.

PREPARED UNDER THE DIRECTION OF

H. E. HAYES, LECTURER STATE GRANGE, DIRECTOR,
BY B. S. PAGUE, U. S. WEATHER BUREAU,
ASSISTANT DIRECTOR.

CENTRAL OFFICE, PORTLAND, OREGON.

SALEM, OREGON:
FRANK C. BAKER, STATE PRINTER
1892.

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Bulletin for September, 1892.

September was nearly normal in all respects. The month to the 20th was smoky. Autumn rains can said to have begun on the 18th. General rainfall from the 18th to the 24th, clearing the atmosphere of smoke. The temperature was slightly above the nominal as was also the rainfall. The warmest period was from the 7th to the 10th; the coldest from the 20th to the 23d.

The first frost of autumn is reported on the 2d and 3d in Western Oregon and in Eastern Oregon in the more important agricultural districts frost did not generally occur until the 21st. In 1889 the first frosts were from September 8th to 12th; in 1890 on September 13th; in 1891 from September 20th to 30th.

Harvesting and threshing were practically finished throughout the State. Hops were secured during the month, fruit drying was in progress, and from the 20th plowing and seeding were pushed in all portions of the State. The indications are that a much larger acreage of grain will be sown this year than usual. The harvest of 1892 has been fairly successful—about an average. The wheat was somewhat injured by drouth during the time that it was heading, but the general yield and quality is about equal to the succcessful years past, save the phenomenal yield of 1891. Hops were not injured by lice so much as was expected and very satisfactory yields are reported from the hop yards. In the Biennial reports of this Bureau, now under preparation, a brief resume of the hop industry of Oregon will be given.

Comparative Data.

The following gives the temperature and precipitation data in previous Septembers:

Data.	1889.	1890.	1891.	1892.
Mean temperature	59°.5	59°.6	59°.2	60°.6
Maximum temperature	98°.	98°	100°	102°
Minimum temperature	16°	23°	22°	22°
Average rainfall	1.42	0.41	2.06	1.66

BAROMETRIC PRESSURE.

(Reduced to sea level.)

The highest pressure occurred on the 6th, immediately preceding the high temperature, and the lowest occurred on the 22d, which was accompanied with the lowest temperature of the month, and general rains.

TEMPERATURE.

(Expressed in degrees and tenths, Fahrenheit's scale.)

The mean temperature of the state for September, 1892, was 60°.6, which is 0.8 of a degree above the September normal. The highest temperature, 102°, is reported from Canyon City on the 12th; the lowest, 22°, is reported from Burns on the 21st.

The mean and the departure from the normal in the various geographical divisions of the state, is as follows:

District.	Mean.	Departure.
Coast	59.2	-1.9
Willamette Valley	60.3	+0.1
Southern Oregon	62.0	—0.1
Eastern Oregon	61.0	-1.1
The State as a whole	60.6	+0.8

The highest mean, 66°.4 is reported from Arlington, the lowest, 55°.8 is reported from Burns.

The maximum temperature occurred on from the 7th to 12th.

The minimum temperature occurred on from the 2d to 4th and from the 20th to 23d.

The monthly range in temperature was quoted 68° at Burns and least, 31° at Astoria.

The mean maximum ranged from 61 to 87° and the mean minimum from 36 to 53°.

The maximum temperature was above 90° on one day in Western Oregon, except in Jackson county, where it was above 90° on 4 days, and in Eastern Oregon it was above 90° on from 1 to 6 days, except at New Bridge, where for 14 days it was above 90°; at one station, Canyon City, it was above 100° (102°).

The minimum temperature was below 40° on from 1 to 6 days in Western Oregon, and in Eastern Oregon on from 1 to 28 days.

Temperatures below the freezing point are reported in Umatilla, Wallowa and Baker counties and in the counties south of the Blue mountains.

PRECIPITATION.

(In inches and hundredths.)

The average for the state, 1.66 inches is .20 of an inch above the September normal. The greatest amount, 10.27 inches, is reported from Glenora, Tillamook county. Arlington reports .12 of an inch, the least in the state.

The average amount that fell in each district and the departure from the normal is as follows:

District.	*Average.*	*Departure.*
Coast	3.55	+0.52
Willamette Valley	2.00	+0.35
Southern Oregon	0 60	—0.12
Eastern Oregon	0.51	+0.07
The State as a whole	1.66	+0.20

Rain fell in the northwestern portion of the state and along the entire coast on the 5th and 6th. General rain fell from the 18th to 26th. The other days of the month were generally cloudless to partly cloudy, with smoke to the 20th filling the atmosphere.

From July 1st to September 30th the precipitation is above the normal generally throughout the state.

The total amount in the 3 months, July 1st to September 30th, amount to from 3 to 14 inches along the coast; from .31 of an inch to 4 inches in the interior valleys, and from .15 to 1.59 of an inch in Eastern Oregon.

No snow is reported to have fallen during the month.

WIND.

(Velocity from self-registering anemometers.)

The winds were northerly west of the Cascades, while to the east of them they were westerly. On the 5th, 22d and 23d brisk to high southerly winds prevailed.

WEATHER.

Rain fell on 26 per cent of the days of the month, 72 per cent of the days were cloudless while 28 per cent were cloudy or partly cloudy.

MISCELLANEOUS DATA.

FROSTS.

Light frosts are reported as follows: Hubbard 2d, Vernonia 2d and 3d, Joseph 1st and 2d, Vale 2d, 3d, 6th and 7th, Pendleton 19th, Heppner 21st and 22d, Sparta 21st.

Killing frosts are reported at Pendleton 21st, Joseph and New Bridge 22d, Crook 22d and 23d.

HAIL.

Hail occurred at Heppner on 23d.

THUNDER.

Thunder was heard at Glenora, Newport and Vernonia on 22d, at Miramonte Farm (near Aurora) on the 23d, Hubbard on 18th, New Bridge on 21st, and at Lakeview on 1st, 8th and 21st.

STORMS.

On the 22d a severe storm and very heavy rain occurred at Glenora.

OBSERVERS' REMARKS.

CURRY COUNTY.

Langlois.—The month has been favorable to all farm operations. The early part of the month saw the close of the threshing of a beautiful harvest. Sufficient rain has fallen to start the plows for fall sowing. The potato crop will be benefited by the rains, but the crop will be short. Corn and peas

will be good. Clover seed is well filled. The fruit crop will be very short, there will be hardly enough for home consumption. Grass has started nicely and the fall range is good. A larger acreage of grass seed will be sown than usual. There have been no forest fires here this fall and the atmosphere has been clear of smoke.

COLUMBIA COUNTY.

Vernonia.—The month has been smoky and at times the sun was scarcely visible. The mean temperature for this month is almost exactly the mean for fifteen years, being only .03° above. The rainfall is 2.04 inches above the normal for three years.

MULTNOMAH COUNTY.

East Portland—September has been a pretty fair month. Its days have been fine with cool nights. It rained on 9 days. Total rainfall, 1.89. We had 11 clear days, 10 partly cloudy, and 9 cloudy ones. Flocks of geese going south on the 12th, northwest on the 26th, and southeast on the 28th. Fall vegetables are doing well. A little more rain is needed to get the ground into shape for fall plowing. The general health is good. Ozone, 6 per cent per day for the month.

YAMHILL COUNTY.

Whinfell (Newberg).—The rainfall for the month has apparently been about or a little above the normal, but was unusually heavy for the first in the season, most of it falling on the 22d. It has been sufficient for farmers to commence plowing, and the fine weather since has been very favorable for that and seeding. Prunes are nearly all dried by the close of the month.

MARION COUNTY.

Mount Angel.—The month was colder than usual, its departure from the normal of seven years being 2°, whilst the precipitation was a little in excess, its departure from the normal being 0.15 inches.

The beginning of the month was very smoky; in the middle of the month the abundant rain washed down most of the smoke, and the rest of it was driven away by the prevailing southern and

southwestern winds, so that at the close of the month there was a series of the most beautiful autumn days.

LINN COUNTY.

Albany.—First migration of geese for the season was on the 24th going south. Geese going south also on the 26th and 27th.

JACKSON COUNTY.

Jacksonville.—Since the rain of the 18th there has been most delightful weather, very clear, pleasant and quite warm during the day but cool at night.

Although this was a very bad year for fruits of all kinds, yet the exhibit at our Jackson County fair was excellent. The fruit and vegetables could not be beat. The grape and floral displays were very large and away ahead of anything of the kind at any previous fair.

The Dalles.—The first twenty days of the month were intensely smoky. A light parhelia observed at 9 A. M. of the 20th.

GILLIAM COUNTY.

Arlington.—Very dry. The springs are lower than for many years. Harvest south of Columbia river has produced about seed and feed of wheat. There are being seeded this fall 30 or 40 per cent. more wheat than ever before.

Lone Rock.—There has been about the average amount of rain for the month. The grass is more plentiful than for a number of years back, and stockmen are anticipating an easy winter on stock. Thursday the 27th was the most windy day known here for a number of years.

UNION COUNTY.

Sparta.—There was an eclipse of Saturn on September 3d at 9:20 P. M.; it was distinctly seen.

A remarkably dry September. There has been some rain toward the latter end of the month, but too late, however, to be of any benefit to the grain. Fruit of all kinds is doing well. The range is somewhat dry, but there is good feed in the mountains

New Bridge.—There was a light frost at the lower end of the valley, but none at the upper end. A heavy fog hung over the

valley from the 19th to the 21st. Snow fell on the mountains on the 2d.

GRANT COUNTY.

Canyon City. There was a thunder storm on the mountains in the distance, time of the loudest thunder 4 P. M. There was no rain at this station.

CROOK COUNTY.

Crook.—The last rain was of great benefit to this section. Grass is growing well. Stock on the range are in good condition. Gardens in most localities are failures. The potato crop is short. Crops throughout the county are about half the average yield. There is a large amount of old hay left over from last year. Stockmen are jubilant over the late rain.

Velocity and Direction of Wind at Portland.

Table showing total number miles of wind and the number of hours and minutes that the wind blew from each point of the compass during September, 1892, as recorded at central office, Portland, Or. In obtaining this data velocities of less than one mile an hour are considered as calm.

1892.	*North.*		*Northeast.*		*East.*		*Southeast.*		*South.*		*Southwest.*		*West.*		*Northwest.*		*Calm.*	
September.	*Miles.*	*Hours and min.*	*Miles.*	*Hours and min.*	*Miles.*	*Hours and min.*	*Miles.*	*Hours and min.*	*Miles.*	*Hours and min.*	*Miles.*	*Hours and min.*	*Miles.*	*Hours and min.*	*Miles.*	*Hours and min.*	*Miles.*	*Hours and min.*
Total	948	219:55	85	25:00	132	39:35	201	34:30	1,410	205:20	135	36:15	27	4:50	751	113:50	26	40:45
Percentage	26	31	2	3	4	5	5	5	38	29	4	5	1	1	20	16	1	6

From the above data the average time the wind blew from each point of the compass to record one mile, was as follows: North, one mile in 14 minutes; northeast, one mile in 18 minutes; east, one mile in 18 minutes; southeast, one mile in 7 minutes; south, one mile in 9 minutes; southwest, one mile in 16 minutes; west, one mile in 11 minutes; northwest, one mile in 9 minutes; calm, one mile in 94 minutes; *i. e.*, when the wind was from the southeast during September, 1892, it had the highest average hourly velocity (one mile in 7 minutes, or 9 miles per hour). When the wind direction was from the east, it had the least average velocity (one mile in 18 minutes or 3 miles per hour). The average hourly velocity for calm was three-fourths of one mile per hour.

Southern Pacific Railroad Data.

The following table gives, for September, 1892, the mean temperature, the highest (maximum) and the lowest (minimum) temperature, the total precipitation, the total amount of unmelted snowfall, and the prevailing direction of the wind for the places named. The observations are made under the auspices of the Southern Pacific Railroad by the agents at the various stations :

Stations.	*Temperature.*			*Precipitation.*		*Prevailing dir. of wind.*
	Maximum.	*Minimum.*	*Mean.*	*Rainfall.*	*Total snowfall.*	
Albany	88	46	63.8	1.65	------	S.
Ashland	87	48	63.0	0.34	------	N.
Aurora	94	42	62.2	1.76	------	S.
Brownsville	90	43	63.6	1.86	------	NW.
Corvallis	88	45	62.5	1.55	------	W.
Comstock	92	38	58.0	2.37	------	S.
Grant's Pass	97	52	65.6	00	------	N.
Junction City	88	44	60.8	0.16	------	S.
Lafayette	94	38	59.2	1.66	------	W.
Leland	98	40	60.8	0.29	------	N.
McMinnville	94	39	60.0	2.25	------	S.
Monmouth	94	38	54.9	0.18	------	S.
Portland	86	42	60.6	1.43	------	N.
Roseburg	92	44	63.3	0.94	------	N.
Riddles	98	40	60.6	1.06	------	N.
Salem	75	30	51.6	1.67	------	N.
Siskiyou	95	40	60.8	0.80	------	S.
Sheridan	92	41	61.6	1.45	------	W.
Springfield	88	43	61.0	1.61	------	N.
Silverton	86	40	59.5	1.25	------	N.
West Fork	------	------	------	------	------	------

Soil Temperature at Pendleton.

Table showing daily maximum, minimum, and mean air temperature at Pendleton, Oregon, during September, 1892; also the daily temperature of the soil at depths of 4, 8, 12, and 24 inches below the surface, together with the total daily precipitation. Soil thermometers observed at 3 P. M. daily.

Date.	*September*, 1892.																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	---	*Sept.*
Maximum temperature	82	86	71	87	81	79	86	91	91	91	94	95	82	84	84	80	76	82	79	73	65	68	67	67	81	82	94	88	82	80	---	81.6
Minimum temperature	36	43	31	32	36	45	38	36	37	39	38	38	41	45	49	36	39	40	39	49	32	31	47	44	41	40	43	46	42	41	---	39.8
Mean temperature	59	64	51	60	58	62	62	64	64	65	66	66	62	64	66	58	58	61	59	61	48	50	57	56	61	61	68	67	62	60	---	60.7
Soil temperature, depth of 4 inches	67	66	65	65	67	67	67	67	68	68	68	68	65	65	67	65	64	64	63	62	59	56	56	56	57	63	65	66	65	65	---	64.2
Soil temperature, depth of 8 inches	66	65	64	64	65	65	65	64	65	65	65	65	64	64	65	64	63	63	63	62	59	57	57	57	58	60	62	63	63	63	---	62.1
Soil temperature, depth of 12 inches	66	65	65	64	64	64	64	64	64	64	64	64	64	63	64	63	63	63	63	63	61	59	59	59	59	60	60	61	61	61	---	62.5
Soil temperature, depth of 24 inches	66	65	64	64	65	65	65	64	64	64	64	64	64	64	64	64	63	63	63	63	62	61	61	61	60	60	61	61	61	61	---	63.0
Total precipitation	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	.08	.03	---	---	.14	10	---	---	---	---	---	---	---	0.35

Air and Soil Temperature at Corvallis.

The following table gives the daily readings during September, 1892, of the maximum solar thermometer, the maximum air thermometer, the minimum terrestrial thermometer, the minimum air thermometer, showing respectively the heat of the sun's rays, the extreme heat of the air, the lowest radiated heat, and the lowest temperature of the air; also the temperature of the soil at depths of 2 inches, 6 inches, 1, 2, 3, and 4 feet deep. The entire observations of soil thermometer are given, which were taken at 8 A. M., 12 noon, and 4 P. M., daily, local time. Also the total daily precipitation.

Data.	*September*, 1892.															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Maximum solar temperature	132	135	132	123	132	141	135	136	129	123	127	104	79	76	126	121
Maximum air temperature	76	73	79	75	75	77	85	90	87	86	87	78	64	62	74	74
Minimum terrestrial temperatnre	34	35	36	36	42	44	43	47	43	44	46	52	59	37	37	45
Minimum air temperature	42	37	38	38	37	46	48	46	48	47	47	48	55	55	38	42
Soil temperature 2 inches deep, 8 A. M.	64	63	62	62	61	62	63	64	65	64	64	65	64	61	58	59
Soil temperature 2 inches deep, 12 noon	69	70	70	69	68	70	72	73	71	71	72	70	65	65	66	66
Soil temperature 2 inches deep, 4 P. M.	72	71	73	70	70	71	73	75	74	74	76	72	66	65	68	68
Soil temperature 6 inches deep, 8 A. M.	66	64	63	63	62	64	65	66	67	66	66	67	65	65	60	61
Soil temperature 6 inches deep, 12 noon	67	67	67	66	66	67	68	69	68	69	69	68	65	65	64	64
Soil temperature 6 inches deep, 4 P. M.	69	69	70	68	67	70	70	71	70	71	72	69	65	65	65	66
Soil temperature 1 foot deep, 8 A. M.	68	67	66	66	65	65	66	67	68	68	67	67	66	65	63	63
Soil temperatnre 1 foot deep, 12 noon	68	67	66	66	65	66	66	67	68	68	67	67	66	65	63	64
Soil temperature 1 foot deep, 4 P. M.	68	67	67	66	65	66	66	68	69	69	69	67	65	65	63	65
Soil temperature 2 feet deep, 8 A. M.	66	66	66	65	65	65	65	65	65	66	66	66	65	65	64	64
Soil temperature 2 feet deep, 12 noon	66	66	66	65	65	65	65	65	65	66	66	66	65	65	64	64
Soil temperature 2 feet deep, 4 P. M.	66	66	66	65	65	65	65	66	65	66	67	66	65	65	64	64
Soil temperature 3 feet deep, 8 A. M.	65	65	65	65	64	64	65	65	65	65	65	65	65	64	64	64
Soil temperature 3 feet deep, 12 noon	65	65	65	65	64	65	65	65	65	65	65	65	65	64	64	64
Soil temperature 3 feet deep, 4 P. M.	65	65	65	65	64	65	65	65	65	65	65	65	65	64	64	64
Soil temperature 4 feet deep, 8 A. M.	64	63	63	63	63	63	63	64	64	64	64	63	63	63	63	63
Soil temperature 4 feet deep, 12 noon	64	63	63	63	63	63	64	64	64	64	64	63	63	63	63	63
Soil temperature 4 feet deep, 4 P. M.	64	63	63	63	63	63	64	64	64	64	64	63	63	63	63	63
Total daily precipitation					†								†			

Air and Soil Temperature at Corvallis—Concluded.

Data.	September, 1892.															
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	--	Av.
Maximum solar temperature	119	124	120	75	115	75	79	123	128	135	132	129	125	125	--	118.3
Maximum air temperature	72	74	65	60	61	56	58	66	77	77	81	75	69	72	--	73.5
Minimum terrestrial temperature	40	53	52	33	44	49	45	40	48	46	45	43	46	39	--	43.4
Minimum air temperature	45	42	54	48	34	48	49	48	42	50	45	47	45	49	--	45.3
Soil temperature 2 inches deep, 8 A. M.	60	59	62	62	53	54	54	51	55	59	59	60	59	59	--	59.8
Soil temperature 2 inches deep, 12 noon	67	66	64	62	58	56	57	59	64	66	66	66	62	64	--	66.1
Soil temperature 2 inches deep, 4 P. M.	70	69	64	62	59	55	57	60	65	67	67	69	63	67	--	67.8
Soil temperature 6 inches deep, 8 A. M.	62	61	63	61	55	56	56	56	57	60	61	61	61	60	--	62.0
Soil temperature 6 inches deep, 12 noon	65	64	63	63	56	56	56	58	61	64	64	64	61	63	--	64.2
Soil temperature 6 inches deep, 4 P. M.	67	65	63	63	59	56	57	59	63	65	65	66	62	64	--	65.7
Soil temperature 1 foot deep, 8 A. M.	64	64	64	63	60	58	58	57	59	61	62	62	62	61	--	63.7
Soil temperature 1 foot deep, 12 noon	64	64	63	63	59	58	58	58	59	61	62	62	61	61	--	63.7
Soil temperature 1 foot deep, 4 P. M.	65	64	63	63	59	58	58	58	60	61	62	62	62	62	--	64.1
Soil temperature 2 feet deep, 8 A. M.	64	64	64	63	63	62	62	61	61	61	61	62	62	62	--	63.9
Soil temperature 2 feet deep, 12 noon	64	64	64	63	63	62	62	61	61	61	61	62	62	62	--	63.9
Soil temperature 2 feet deep, 4 P. M.	64	64	63	63	63	62	62	61	61	61	61	62	62	62	--	63.9
Soil temperature 3 feet deep, 8 A. M.	64	64	63	63	63	63	62	62	62	62	61	61	62	62	--	63.6
Soil temperature 3 feet deep, 12 noon	64	64	63	63	63	63	62	62	62	62	61	62	62	62	--	63.7
Soil temperature 3 feet deep, 4 P. M.	64	64	63	63	63	63	62	62	62	62	61	62	62	62	--	63.7
Soil temperature 4 feet deep, 8 A. M.	63	63	63	63	63	63	62	62	62	62	62	62	62	62	--	62.9
Soil temperature 4 feet deep, 12 noon	63	63	63	63	63	63	62	62	62	62	62	62	62	62	--	62.9
Soil temperature 4 feet deep, 4 P. M.	63	63	63	63	63	63	62	62	62	62	62	62	62	62	--	62.9
Total daily precipitation	------	------	------	.20	.10	.80	.58	------	------	------	------	------	------	------	--	1.68

National Weather Crop-Bulletins.

U. S. Department of Agriculture,
Weather Bureau,
Washington. D. C., September 6, 1892.

TEMPERATURE.

In the Rocky Mountain regions. the south portions of Texas and Florida, and along the Canadian border from Lake Superior to northern New England the temperature of the week has been slightly above the normal, but in the remaining districts the weather has been cooler than usual. the greatest deficiencies varying from 4° to 6°, occurring over the section from southeastern Minnesota and southern Wisconsin southward over Iowa, Illinois, Missouri. Arkansas, Oklahoma and Indian Territories into central Texas. In the Pacific Coast States there was also a deficiency in the temperature amounting to from 3° to 6° in California, and less in the remaining districts.

The seasonal temperature. from March 1st to date, averages slightly above the normal, only on the New England and middle Atlantic coasts. the northern portion of the Lake region and extreme southern Texas. A general. though slight. deficiency exists elsewhere. The greatest seasonal deficiency, varying from 2° to 3°, covers the Missouri Valley. central Arkansas, northern Louisiana. and eastern Mississippi.

Warmer weather is required for corn in the northern portion of the central valleys. and the harvesting of this staple will not be completed before October 1st.

Light frosts occurred during the week in Colorado, Wyoming, South Dakota. northern Nebraska. northern Iowa, Minnesota, Wisconsin. and in portions of New England, inflicting but slight damage. A killing frost was reported from North Dakota and a black frost from northern Minnesota.

PRECIPITATION.

More than the usual weekly rain fell in the upper Ohio valley, just west of the Allegheny range; north of the upper lake

region, in a belt from south-central Texas northward to southern Kansas, and with occasional heavy local showers in portions of the cotton region; elsewhere there was a general deficiency.

There was no rainfall during the week in the section from northern Georgia northeastward to eastern Pennsylvania, covering portions of Maryland, the District of Columbia, central Virginia, and western portions of the Carolinas, in which belt the droughty conditions continue. Rain is needed throughout the central valleys and Middle States, and in the section before mentioned extending into northern Georgia.

The seasonal rains to date show a general deficiency in the Atlantic States south of Pennsylvania, in a strip of country from upper Michigan to west Kentucky and Tennessee, and from southwest Louisiana westward over south Texas, New Mexico, and Arizona, the greatest deficiencies occurring in east Florida, east Georgia, and central North Carolina. The Mississippi and Missouri valleys show a general excess; an excess of from 7 to 8 inches is noted in portions of Mississippi, Alabama, and south Tennessee; from 7 to 14 inches in portions of northern Illinois, northwest Iowa, and south Minnesota, and 10 inches in north-central Nebraska.

TEMPERATURE.

[*For week ending September* 13, 1892.]

The week has been cooler than usual on the central and southern California coasts and generally in all districts east of the Rocky Mountains, the exception being the Red River of the North Valley, the upper Ohio valley, and portions of the Lake region, where the temperature was normal or slightly above. The deficiency in temperature has averaged from 3° to 5° on the Atlantic coast from North Carolina to Massachusetts, and over the greater part of the country between the Mississippi river and the Rocky Mountains. Over the plateau districts, and on the north Pacific coast it was warmer than usual, and along the coast north of California the week was exceptionally warm, the excess in temperature amounting to from 5° to 7° per day.

Frost occurred in the upper Mississippi, Missouri, and Ohio

valleys, New England, and in the northern portion of the middle Atlantic states, but the reports indicate no serious injury. Freezing temperatures prevailed in Wyoming and northern Montana on the 11th.

Early corn is now reported as safe from injury by frosts in the principal corn producing states, and if late corn escapes injury during the next two weeks the crop will be safe.

PRECIPITATION.

More than the usual amount of rain has fallen in the upper Mississippi and lower Missouri valleys, over Arkansas, Louisiana, and eastern Texas, and along the Atlantic coast from North Carolina southward, There has also been a slight excess of rainfall in the Dakotas and in portions of Pennsylvania and New York. Unusually heavy rains fell along the coasts of South Carolina, Georgia and eastern Florida, in the upper Mississippi valley, central Arkansas, and near the mouth of the Mississippi, where the actual rainfall has ranged from 2 to 5 inches. From the Ohio Valley eastward to the Atlantic coast but little rain fell during the week, and over considerable portions of this region there was an entire absence of rain. Little or no rain has fallen in the Rocky Mountain districts, and none fell on the Pacific coast except light showers in Washington.

Cotton picking, which began in the southern portion of the cotton region two weeks ago, is now general in the northern portion of the cotton region, and some shipments have been made. The cotton crop in South Carolina is reported as seriously injured, and in Louisiana there are complaints of rust and boll-worms.

Severe drought continues throughout Maryland, and rain is much needed in portions of Virginia, South Carolina, Kentucky, Arkansas, Michigan and Kansas.

TEMPERATURE.

[*For the week ending Septdmber* 20, 1892.]

The week was warmer than usual in New England, over the eastern slope of the Rocky mountains, the plateau regions, and on the north Pacific coast. The excess of temperature amounted

to from 2° to 4° in New England and from 3° to 9° in the Rocky mountain regions, where the week was exceptionally warm. In the upper Mississippi valley, Lake region, and along the immediate Atlantic coast nearly normal temperatures prevailed, while over the region from the central Mississippi and Ohio valleys southward to the Gulf the week was decidedly cooler than usual, the deficiencies in temperature amounting to from 3° to 6°.

The seasonal temperature from March 1 is normal or slightly above along the northern border from the Red River valley eastward to the Atlantic coast, and thence southward to North Carolina. It was also normal or above in the vicinity of San Antonio, Tex., Santa Fe, N. M., and Olympia, Wash.; elsewhere over the country the seasonal temperatures are below the normal, the most marked deficiencies occurring in the Mississippi and Missouri valleys.

Frosts have occurred throughout the upper Mississippi and Missouri valleys, and in New England, and have caused some slight injury to corn, which is now being generally cut. If favorable conditions continue late corn will be safe in from 10 days to 2 weeks.

Cotton picking continues general, except in Tennessee, where it has not yet begun, and the picking of the early crop has been completed in Georgia.

The week has been generally favorable for farm work, and much plowing and seeding has been done.

PRECIPITATION.

With the exception of a slight fall of rain along the northern California and southern Oregon coasts, and a light sprinkle in northeast Oregon, no rain fell during the week over the region from the Mississippi river to the Pacific coast. Over the greater part of the country eastward of the Mississippi there was more than the usual amount of rain, and from the lower lake region southward to the east Gulf coast the excess amounted to from 1 to 3 inches, being greatest in southeast Michigan, northern Alabama, and on the east Florida coast. In North Carolina, except along the coast, southern Virginia, and in portions of New York

and New England, the weekly rainfall was slightly below the average.

The seasonal rainfall from March 1 is in excess of the average in the states of the Mississippi and Missouri valleys, in the lower lake region, portions of New England and the middle Atlantic states, and in central and eastern Texas, the greatest excess occurring in the upper Mississippi valley.

TEMPERATURE.

[*For week ending September 27, 1892.*]

The week has been warmer than usual throughout the entire country, with the exception of extreme southern Florida and over a small area including Northern Idaho and the adjacent portions of Washington and Oregon, where it was slightly cooler than the average, and on the central California coast, where the temperature was normal. It was unusually warm for the season over all northern and central districts east of the Rocky Mountains, over which regions the excess of temperature ranged from 3° to 12°, the greatest departures occurring in the Missouri, upper Mississippi, and Red River of the North valleys, where the temperature averaged from 9° to 12° per day above the normal. Along the south Atlantic and Gulf coasts the excess in temperature ranged from 1° to 3° per day.

The warm, dry weather of the week has been favorable for outstanding corn and for cutting and housing tobacco. A large part of the corn crop has already been cut, and that remaining in the fields is now considered safe from injury by frosts, which have, however, caused some damage to corn and vegetables in low lands of northern New York on the 20th, and slight damage was done in northern Illinois on the 26th. So far this season the injury from frost has been comparatively slight.

PRECIPITATION.

More than the usual amount of rain has fallen from the upper Ohio valley southeastward to the Atlantic coast, over portions of the Lake regions, and on the north Pacific coast; and in the Carolinas, eastern Georgia, and on the north Pacific coast the rainfall was very heavy. In New England, along the middle

Atlantic coast, in the Gulf States, throughout the Mississipi and Missouri valleys and thence westward, with the exception of the north Pacific coast, the rainfall was below the average, and to the westward of the Mississippi but little or no rain has fallen during the week.

While the warm, dry weather in the central valleys and Northwest has been generally favorabe for securing crops, moderate rains would be beneficial for fall plowing and seeding.

TEMPERATURE.

[*For week ending October 9, 1892.*]

There has been a slight but general deficiency in temperature along the Atlantic coast and in the east Gulf states, being most marked on the Virginia coast, where it amounted to 3°. Over the entire country to the westward of the districts named the week has been warmer than usual, and notably so from the upper Lake region and upper Mississippi valley westward to the north Pacific coast, where the excess of temperature ranged from 6° to 15° per day, the greatest departures occurring in the upper Missouri and Red River of the North valleys.

Frost occurred in the Ohio valley on September 27th, in New England on the 30th, and generally throughout the lower Lake region and middle Atlantic States on October 2d and 3d.

The temperature for the crop season now closed has been below the average over the greater portion of the conntry, the greatest deficiency occurring in the lower Arkansas and Mississippi valleys, where it has exceeded 2° per day. Along the Atlantic coast north of Virginia, and over the northern districts from Minnesota eastward, the seasonal temperature has been normal or slightly above.

PRECIPITATION.

There has been more than the usual amount of rain in northern and central portions of Florida, along the coasts of Louisiana and eastern Texas, and over limited areas in the upper lake region and upper Mississippi valley. On the east Florida coast the rainfall was very heavy, the actual fall ranging from 3 to 4 inches, but elsewhere in the districts named the excess has been slight.

Upon the whole the week has been exceptionally dry, and at no time since March 1st has there been an absence of rain over so much of the country as during the past week. Along the Atlantic coast from the Carolinas northward, and thence westward to the Pacific coast, excepting areas of limited extent, principally in the lake region and upper Mississippi valley, no rain has fallen.

The warm, dry weather has been exceptionally favorable for the securing of all crops. Corn for the most part has been secured, and that remaining uncut is practically safe from injury by frost.

Owing to the light rainfall over so much of the country during the past two weeks, fall plowing has been somewhat retarded in some sections, and pastures need rain. Wheat seeding has, however, progressed favorably, and is reported as practically completed in Ohio and Illinois. As reported during the previous week, all conditions have continued favorable for securing, housing, and curing tobacco.

The crop season of 1892, from March 1 to October 3, closes with a general excess of precipitation throughout the Mississippi valley and generally over all northern districts eastward of the upper Missouri valley. In central and western Texas, eastern Maine, and in the states bordering on the Atlantic from Maryland southward the seasonal rainfall has been below the average, the deficiency in Florida and along the Texas coast ranging at some stations from 10 to 15 inches.

Oregon Weather-Crop Bulletin.

The following bulletin was issued from the Central Office during September, 1892:

Western Oregon.

WEATHER.

There has been very little change in the weather conditions of the past seven days as compared with the preceding week. If anything the temperature was slightly below the average

Note.—The Weekly Weather Crop Bulletin for the current season is discontinued with this issue. Until the next crop season monthly bulletins will be issued as usual.

especially on the last two days of the week, viz.: the 3d and 4th. On the latter date the first white frost of the season occurred in exposed localities of Douglas County, injuring tender vegetation to some extent. In some sections the days were very warm, but were always followed by cool nights. The partial drought of the past few weeks has remained unbroken till the 4th, but at this writing light rains are falling throughout western Oregon.

The grain crop has all been threshed by this time. Hop-picking is now in full blast in most places. Polk county farmers report that in yards sprayed with whale-oil soap the lice have done very little damage. Corn in a few localities seems to have received a set back from the cool nights. Brownsville folks claim that the largest crop of corn ever raised in the Willamette valley will be gathered this year. Reports from other sections, however, are not as encouraging by any means. The onion crop is now being pulled. The general impression seems to point to a short crop. Fall apples and pears are ripening. Potatoes must be awfully scarce this year when the same are selling at 3 cents a pound in some counties.

Eastern Oregon.

WEATHER.

The concensus of the weekly reports from correspondents in this section is: "Fine weather for harvesting purposes and general farm work." There has been no rainfall at all during the week, but the indications are for a few scattered showers before long, and they would be very welcome just at present, not that crops would receive much benefit therefrom, but that they would clear up the smoke and dust floating in the air and would perhaps improve the ranges. The temperatures have not been quite so high this week; the extremes have ranged from 33° to 89°. A light frost is reported from Union county on the 4th; it did hardly any damage at all.

CROPS.

Threshing operations continue in full activity. In portions of Grant county the wheat crop is expected to turn out almost as good as the average crop.

Haying has been going on steadily; there will be an abundance of it this year. Stock is looking very well. "Potatoes are scarce!" is the cry now heard everywhere except in Malheur county. Our Gilliam county correspondent writes that there is hardly a bushel of merchantable potatoes in his district. Oats are now being harvested in Sherman county, and the yield will be fairly good. Fruit is reported as ripening fast, apples especially. These are remarkably free from insects this season.

Western Oregon.

TILLAMOOK COUNTY.

The weather has been pleasant. Wild berries of all kinds are in great abundance. The potato crop will be light on accunt of the blight.

CURRY COUNTY.

The temperature has been high, reaching 87° on the 28th. The atmosphere has been cool and the nights clear. Potatoes are somewhat blighted. The second crop of figs is promising. The threshers report the yield of grain as generally good.

COLUMBIA COUNTY.

There has been less smoke from forest fires than is usual at this time of the year. The river is extremely low. There is scarcely any fruit of any kind on the river, except blackberries, which were plentiful. Grass is drying up, but stock are fat and doing well. A threshing machine will be employed for the first time on the river near Vernonia.

WASHINGTON COUNTY.

The onion crop is being pulled. The yield is below the average. There has been nothing in the weather to improve the potato crop. The weather has been excellent for burning slashings.

CLACKAMAS COUNTY.

Although the nights have been cool, the days have been dry and hot. Dew has helped the plants some. Farm work is about finished. The ground is too hard for plowing. The clearing-up process has begun.

MARION COUNTY.

Harvesting is about over. Some fall wheat went 35 and 40 bushels to the acre. Hop-picking is in full blast, as the owners of hopyards wish to get the hops all picked while the good weather lasts. The crop will be about two-thirds of an average one. Potatoes are drying up. Corn will be a little over half a crop.

YAMHILL COUNTY.

Grain is about all threshed. The largest yield of wheat reported is 52 bushels to the acre, on prairie land. Potatoes are a light crop, as are all root crops. Corn is less than half a crop. Hogs are quite scarce. Farmers are rushing their oats to market. It is getting more smoky, obscuring objects for two miles distant. Small shipments of fruit, principally pears and plums, are being made. What fruit there is is badly stung by codlin moths. The melon crop will be light, and the fruit is small.

POLK COUNTY.

Grain is all threshed and was an average crop. The hop crop is about an average one. The lice have been quite damaging. Three yards where the hops were sprayed with whale-oil soap and quassia have been free from lice. Rain is needed by grass and gardens.

BENTON COUNTY.

It has been very smoky. Rain is needed very much. Fall apples and pears are ripening. Corn is late. Tomatoes and beans will soon be ripe. Threshing of spring grain is going on The cool nights seem to have kept back corn.

DOUGLAS COUNTY.

The first white frost of the season occurred on September 3, injuring tender vegetables somewhat. Threshing is over in the valley. Wheat came up to an average. Oats was about two-thirds of an average yield. Corn appears to be a full crop.

JOSEPHINE COUNTY.

The highest temperature has been 91°; lowest, 85°. It has been quite smoky with light clouds.

JACKSON COUNTY.

Very dry and smoky.

Eastern Oregon.

SHERMAN COUNTY.

Hill lands are very dry and the small streams are at their lowest. Considerable burning has made the air full of smoke. Oats are now being harvested on low ground. The yield promises to be good. Rain would benefit grass, but the stock all looks well. Potatoes are suffering from drought.

GILLIAM COUNTY.

The potato digging is about over. There is hardly a bushel of excellent ones in the county.

UNION COUNTY.

There have been light frosts, which have done no injury. The crops are over. There is no change in the weather.

BAKER COUNTY.

The weather has been favorable to crops and work. The maximum temperature has been 89°, the minimum 33°.

MALHUER COUNTY

The weather for the past week has been very favorable to farmers; it is warm, dry, and calm. Fruit is ripening well. The potato crop is good. Hay is plentiful and stock is in good condition.

GRANT COUNTY.

The hay crop is harvested and is an excellent one. The third crop of alfalfa is now being harvested, which is a good one, also. The grain is ready to be cut and will prove to be about as good as usual. Fruit and vegetables are not very abundant. Apples are free from all insect pests.

Western Oregon.

WEATHER.

The week opened with threatening weather in all sections, but the long-looked for and needed rains have been conspicuous only by their absence, except a few scattered showers in portions of

the coast counties, but not enough even to lay the dust. The remainder of the week was attended by warm, dry, and densely smoky weather, with tolerably cool nights. Although it is generally conceded that at the present moment a good rain would prove beneficial in many respects, yet heavy rains would do more harm than good, because all farming operations would probably be paralyzed, so that, barring a slight oppressiveness of the at mosphere owing to the dust and smoke held in suspension and a a little heat, the weather has not been so bad after all, since it has permitted the farmers to bring most of their harvesting work to a successful close.

CROPS.

Corn is reported as doing tolerably well under the circumstances. Oats in Curry county will yield from 40 to 45 bushels to the acre. Hop picking is about completed in most counties, and there is every indication of good prices being obtained for the crop this year. Correspondents in the onion district report that their crop is being cured rapidly, the weather being all that could be desired for that purpose. Gardens are not doing as well as they might if only a little rain would come to the rescue. Fruit and tender vegetation in portions of Lane and Josephine counties were slightly injured by frosts in the early part of the week. Prunes are said to be ripening fast in Yamhill county, where several evaporators are in full blast. In some sections the ranges are drying up fast and cattle suffering in consequence. Great forest fires are reported raging in Josephine county, filling the air with a dense smoke. It is really a great pity that so much valuable timber should be thus wantonly destroyed in this state. But few people seem to realize that this wholesale destruction of valuable timber is having a decided effect on the annual amount of rainfall in western Oregon, but it is, as observation shows.

Eastern Oregon.

WEATHER.

Those correspondents who have been busy harvesting their crops are tickled over the fine weather that has prevailed all the week, which has been so favorable for farming operations; while

others who have crops still in the ground are earnestly praying for a few drops of rain, and it is quite rational that they should, for in Morrow county, for instance, there has been but one little shower since last May.

The temperature has not been very high, in fact it was about as usual at this time of year. There has been a goodly amount of sunshine, though at times the smoke was so dense as to completely obscure "Old Sol" himself. The nights were particularly cool; the thermometer hovered around the freezing point on several occasions in exposed places.

CROPS.

The weather has been very favorable for threshing operations, which are nearly completed by this time. A large hay crop is being laid by. Correspondents in the potato-growing districts are disgusted with the way which their crops have turned out. The oat crop in Sherman county has been secured. Fruit is doing fairly well, though the cool nights are not helping it any. Pastures are showing the ill effects of the long drouth, and are fast drying up. The correspondent at Ajax states that beef is shrinking on the ranges as grass grows more scarce.

Western Oregon.

MULTNOMAH COUNTY.

The temperature has been about normal. The harvest is over. Fruit is a failure and what there is is poor in quality.

WASHINGTON COUNTY.

No rain has fallen during the past week and everything needs it. The air is full of smoke. The weather is good for curing the onion crop. Hops in this county are all picked.

CLACKAMAS COUNTY.

Pastures and gardens are suffering from the drought. It has been very smoky, with hot afternoons. Stock suffer for water, and gnats and flies trouble them considerably. Leaves and orchards are turning. The maximum temperature was 86°.

YAMHILL COUNTY.

Threshing is nearly finished. Prunes are ripe and two or three evaporators are running. It has been unusually hot for this time of the season, and it is getting very smoky.

MARION COUNTY.

It is very cloudy and smoky. Hop-picking is almost over and the yield is light, but good prices are looked for.

LINN COUNTY.

The weather yet remains very warm and dry, with no indications of rain. The whole valley is full of smoke. Treshing is almost over and the crop is the lightest this county has given for many years. Rain is much needed to settle the deep dust and to purify the air. Potatoes would also be improved by a good rain.

LANE COUNTY.

There was a light frost on the 2d, which bit tender plants and vines. The potato crop is suffering for the lack of water.

DOUGLAS COUNTY.

Rain is need very much. Corn is in good condition.

JOSEPHINE COUNY.

There was a light frost on the 2d in low places. Treshing grain is over. The maximum temperature was 80°, minimum 35°. The weather has been beneficial to corn.

JACKSON COUNTY.

Great forest fires are still raging in every direction, filling the valley with smoke so dense that one cannot see for a quarter of a mile. Much valuable timber is being destroyed.

CURRY COUNTY.

The maximum temperature was 90° on the 2d; minimum, 45° on the same date. The atmosphere is clear, yet burning is going on; .20 of an inch of rain fell on the 6th, and more is needed for late potatoes. Corn is doing well. The average yield of oats is about 45 bushels, barley 75 and wheat 30.

Eastern Oregon.

SHERMAN COUNTY.

The warm weather continues. Pastures are very dry and rain will help them. The grain harvest is well advanced. There will be a large amount of butter made this fall. The light frosts on the low lands were not severe enough to do damage to anything.

GILLIAM COUNTY.

Grass is getting short and the cattle are growing thin. The cattlemen are well supplied with winter feed.

MORROW COUNTY.

There has only been one slight shower since May, and farmers have had many acres of grain that were not worth cutting. No plowing can be done until it rains.

UMATILLA COUNTY.

The weather has been favorable for harvesting and threshing. The maximum temperature was 90° ; minimum, 48°. No rain has fallen.

UNION COUNTY.

Rain is greatly needed. Fruit suffered from frost on the 4th, and the range is suffering from drought.

BAKER COUNTY.

The weather has been very beneficial to all crops and work. The maximum temperature was 85° ; minimum, 39°.

MALHUER COUNTY.

Warm days and cool nights have prevailed. The cool nights are not favorable to fruit and corn. Threshing is being rapidly pushed.

KLAMATH COUNTY.

The earth is baked and rain is needed for all crops except hay.

Western Oregon.

WEATHER.

[*For week ending September*, 20, 1892.]

The monotony of these long, warm, dry, dusty, and smoky days has at last been broken by the few timely showers of the latter part

of the week just closed. In this section rains have been pretty general, though light, except in a few of the southern counties where over half an inch fell. In portions of Southern Oregon, fruits, vegetables, and grapes have been benefited to some extent by these showers, while pastures everywhere have been greatly improved. Another and no less important effect of this precipitation, has been the extinguishing of the disastrous forest fires that have been raging for so long, and a general clearing up of the dense smoke that has obscured the heavens so much of late. The temperature as well as the sunshine have been rather less than the average amount for this time of year, the deficiency in the latter being due mostly to a densely smoky atmosphere. In short, the weather of the past week has been all that could be desired, and the farmers are contented.

CROPS.

What little corn yet remains in the ground has been improved some by the late showers. Hop-picking is now well-nigh over, and reports indicate a light crop. Fruit and tender vegetation have also received their full share of benefit from the precipitation the past week. Gardens are doing better now than at any time since last July. Fall plowing has at last been made possible in many sections, and will soon begin.

Eastern Oregon.

WEATHER.

The greater part of the week just closed has been attended by warm and dusty weather, but the latter part has seen considerable change, owing to a few light showers of rain in some sections, which were greatly needed and have been duly appreciated by farmers in the favored districts. Elsewhere the conditions reported in last week's bulletin have continued throughout this week. During the early part of the week the temperature ran high as a rule, but fell considerably toward the end of the seven-day period. The sunshine has been about or perhaps a trifle below the average.

CROPS.

There are still a few counties where threshing is still in progress and being rapidly pushed to completion. It seems that grain generally is turning out a little better than expected. The first and second crops of hay in portions of Union and Malheur counties have been very bountiful, better than in years past. Fruit has done well, but it is thought the cloudy weather and probable showers will retard it somewhat this coming week. Very little fall plowing has been done so far, the ground being too hard and dry.

Western Oregon.

CURRY COUNTY.

The average temperature has been normal—maximum, 87°, minimum, 47°. Rain is needed for late potatoes. Threshing is about over. Burning is in progress, but there are no forest fires in this section. No smoke at present. Grapes are ripening fast.

WASHINGTON COUNTY.

No rain has fallen in this section since August 14th; consequently everything is dry. Forest fires cause the sun to be obscured.

MULTNOMAH COUNTY.

Rain is needed. The temperature is below the normal, but nothing can be injured now. Fruit of all kinds in this section is a failure.

CLACKAMAS COUNTY.

There has been a large amount of burning and clearing away of brush in unsightly places.

BENTON COUNTY.

Several light showers have fallen, but they were insufficient to lay the dust. With the exception of some, potatoes and corn, all crops were harvested in good condition. Some varieties of tomatoes are just ripening.

YAMHILL COUNTY.

Threshing is finished. Large fruit evaporators are running. Wheat is over-running in weight 3 per cent. Oats are good weight. Pastures and gardens are dried up. Hops are picked and the crop is light.

POLK COUNTY.

A large portion of the wheat crop is securely stowed away. Hops will all be secured in four or five days. Rain is badly needed. Potatoes will be short. Beets and carrots will improve with rain. Corn is doing rather well.

BENTON COUNTY.

All spring grain is harvested. Ensilage corn is ready to cut. Fall apples are almost ripe. Tomatoes, lettuce, and cabbage are in the market. Rain is very much needed.

LANE COUNTY.

Rain has fallen, and everything is improving.

DOUGLAS COUNTY.

The weather has been excellent for cereals, prunes, pears, and tomatoes. Rain fell on the 18th.

JACKSON COUNTY.

Rain has fallen, the first since June 13. So far .25 of an inch has been registered, and, judging from appearances, more will fall. The rain helped the late fruit, vegetables and grapes, and has probably extinguished the forest fires:

JOSEPHINE COUNTY.

Threshing is finished; the last crop of hay is cut and in the barns. The maximum temperature was 91°; minimum 40°.

Eastern Oregon.

SHERMAN COUNTY.

Heavy fogs prevailed all the week, particularly on the hills. No frosts have been reported as yet on high land, but there have been some light frosts on the low lands. Corn, squash, and cucumbers were slightly nipped on the 3d. Rain will be beneficial.

UMATILLA COUNTY.

The weather has been favorable for harvesting and threshing.

UNION COUNTY.

It has been dry and hot the past week. The outlook for rain is good. Harvest is getting well along. The yield is better than was expected.

MALHUER COUNTY.

The weather has been very favorable for farm work; cool nights, with no frost. Fruit ripens slowly, but if the weather continues favorable it will ripen in two weeks; and there will be one of the most bountiful crops of hay and grain this section has ever produced.

GRANT COUNTY.

The grain crop is being harvested, with indications of an excellent yield. Wheat is an excellent crop. Barley and oats are doing well also. The weather has been very hot, the thermometer ranging in the nineties.

Western Oregon.

WEATHER.

[*For week ending September 27.*]

The temperature has been deficient from 2° to 4° a day; it has ranged from 40° to 80°. There has been an absence of frost. On the morning of the 22d the barometer fell rapidly and a severe wind storm, accompanied by heavy rain, occurred during the afternoon; rain continued up to the 25th, when clearing weather prevailed. Sunday and Monday were perfect days. The rain cleared the atmosphere of smoke and quenched many forest fires. The rainfall amounted to over 3 inches along the northwest coast; from 1.60 to 1.90 inches in the Willamette valley, and from .50 to .85 of an inch in southern Oregon.

CROPS.

The rains were of great benefit to agricultural operations, and injurious to none of the crops. The ground has been softened up sufficient to allow of general plowing and seeding. A large acreage of fall-sown grain is being prepared. Hops have been safely secured; a better crop than was expected was gathered. Corn is ripe and ready to cut. Potatoes are being dug, but are turning out only fairly well. Figs are ripe in Curry county, and are a very good crop.

Eastern Oregon.

WEATHER.

The temperature has been deficient during the past week and frosts occurred on the higher elevations. Fresh snow fellin

parts of the Blue mountains on the 23d. General rains prevailed during the week and amounted to from .25 to .80 of an inch.

CROPS.

The rain has been of great benefit. It has cleared the atmosphere of smoke; it has given the grass a start, and has softened the earth sufficient to allow of fall plowing to begin. Reports indicate preparations for an increased acreage of grain for next year. The rain interfered somewhat with threshing, which is now practically finished, and most of the wheat is now at warehouses and on sidetracks awaiting shipment. Corn is ripe and ready to be gathered. Late peaches are ripening and are of good quality.

Western Oregon.

MULTNOMAH COUNTY.

The weather has been just what was needed for fall plowing, and roots in the ground needed the rain. Gardens will be benefited to a large extent.

WASHINGTON COUNTY.

After the long drought the rain was very acceptable, as all crops are safely housed. The rain will perhaps help late fruit somewhat.

CLACKAMAS COUNTY.

The rain of the past week was of great benefit to the gardens, potatoes and new seeding of meadows and pastures. Enough rain has fallen to start the plow in stubble ground. It has dispersed the smoke. The maximum temperature was 67°; minimum, 46°.

YAMHILL COUNTY.

Threshing is all finished. Hops are all picked. Some wheat is sown on summer fallow. The rain of the 21st and 22d is the first which has fallen since June 16. We had 94 days of dry weather in all. The dust is laid and the atmosphere purified. Farmers will commence potato harvest about October 1. The crop will be a light one.

POLK COUNTY.

The copious rains of the past week will give a fine start to the grass and all late garden products, except potatoes, which are too

far matured to be benefited. The ground is in good condition to be prepared for fall wheat. Wheat and hops are secured in fine condition and the yield has been good.

LINN COUNTY.

The grain is all thrashed and most of the crops are harvested. The rain will bring up the grass and soften the ground for fall plowing. The water in the South Santiam is very low.

DOUGLAS COUNTY.

The total rainfall for the past week was .46 of an inch. The roads for the county fair were benefited. Grass has started again and the atmosphere is now clear. Late apples and pears are almost ripe. Corn is ready to cut for ensilage, and potatoes are in fair condition to be dug.

JOSEPHINE COUNTY.

The weather most of the week has been cloudy with a light fall of rain. The maximum temperature was 76°; minimum, 40°.

CURRY COUNTY.

The average maximum temperature for the week was 88°, minimun 48°. The atmosphere was clear of smoke and the weather conditions favorable for fall work. The late rains will help out the potatoes planted in June. Fine specimens of figs are ripe. The second crop is well along. Prune-drying will be a light job this year in this section. Cattle look well.

Eastern Oregon.

GILLIAM COUNTY.

The past seven days have been cooler than the average. Farmers have largely increased their acreage over former years.

UMATILLA COUNTY.

The weather has been favorable for farm work generally. The late rains have put the ground in good condition for plowing. The total rainfall for the past week was .70 of an inch. The maximum temperature was 79°, minimum 45°.

UNION COUNTY.

The total rainfall for the week was .40 of an inch. The rain retarded the second harvesting of alfalfa. There was a slight frost on the 21st, which injured potatoes.

BAKER COUNTY.

The weather has been cold and there was a heavy frost on the 21st, which was injurious to late grain. The rain for the past week has retarded threshing, and it still continues.

MALHUER COUNTY.

The past week has brought rain and the weather is still threatening. Nearly all the crops are harvested, but a small amount of hay remains in the fields. The weather today is showery.

GRANT COUNTY.

A slight shower yesterday had a tendency to lay the dust and cool the atmosphere. The orchards and gardens will also feel the good effects of it. Threshing is progressing rapidly, with good success and good crops of grain. The streams are very low for this time of year and a little rain will do a great deal of good.

KLAMATH COUNTY.

An unusually heavy rain began to fall on the night of the 17th inst., and continued all day Sunday, with showers on Monday. A few ranchers were caught with a little hay still in the field, but the damage was slight.

Last Crop Report of the Season.

This ends the weekly crop-weather reports of 1892; they will be resumed next year at the opening of the growing season. Observer Pague takes this opportunity to thank the large corps of correspondents throughout the State for their promptness and faithfulness in reporting so accurately their crop-weather conditions, and trusts that next year they may again be with the service in its work. The season has been fairly successful in all productions for the Oregon farmer; and these bulletins have, as accurately as possible, portrayed the general conditions from seed time to harvest, and it is hoped that they have been of value to the public. The monthly bulletin will, as usual, continue to be issued.

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BAKER COUNTY.

The weather has been cold and there was a heavy frost on the 21st, which was injurious to late grain. The rain for the past week has retarded threshing, and it still continues.

MALHEUR COUNTY.

The past week has brought rain and the weather is still threatening. Nearly all the crops are harvested, but a small amount of hay remains in the fields. The weather today is showery.

GRANT COUNTY.

A slight shower yesterday had a tendency to lay the dust and cool the atmosphere. The orchards and gardens will also feel the good effects of it. Threshing is progressing rapidly, with good success and good crops of grain. The streams are very low for this time of year and a little rain will do a great deal of good.

KLAMATH COUNTY.

An unusually heavy rain began to fall on the night of the 17th inst., and continued all day Sunday, with showers on Monday. A few ranchers were caught with a little hay still in the field, but the damage was slight.

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TABLE NO. 1.

MISCELLANEOUS METEOROLOGICAL DATA FOR THE MONTH OF SEPTEMBER, 1892.

District, station, and county.	Elevation above mean tide level	Atmospheric pressure: Mean reduced barometer	Highest barometer	Date	Lowest barometer	Date	Temperature of the air, in degrees and tenths. Fahrenheit's scale: Monthly mean	Departure (plus or minus) from the average	Maximum	Date	Minimum	Date	Range	Mean maximum	Mean minimum	Number times temperature reached: 90° or above	40° or below
COAST—																	
Fort Canby, Wash.	179	29.98	30.29	Sept. 6	29.19	Sept. 22	56.6	-|- 0.6	75	Sept. 7	47	Sept. 30	28	61.3	52.0	0	0
Astoria, Clatsop county	38						58.8	-|- 4.0	75	7	44	30	31	64.6	52.9	0	0
Tillamook Rock Lighthouse (in ocean)	140																
Glenora, Tillamook county							57.9		89	2	35	2,4	54	69.9	45.9	0	1
Toledo, Benton county	50						59.5		85	7	40	2	45	72.2	46.8	0	1
Newport, Benton county	10						58.4		78	5	36	3	42	66.8	48.1	0	4
Gardiner, Douglas county	12																
Bandon, Coos county	55						57.2	-|- 1.1	72	19	39	21	33	62.1	52.3	0	1
Langlois, Curry county	500						66.0		90	2	40	22	50	86.1	47.1	1	1
WILLAMETTE VALLEY—																	
Olympia, Wash.	36	29.981	30.279	6	29.370	22	59.9	-|- 2.7	82	10	40	3	42	70.1	49.4	0	2
Vernonia, Columbia county	1228						58.1		92	11	38	2	54				
Portland, Multnomah county	80	29.997	30.262	6	29.575	22	62.9	-|- 1.4	90	11	42	21	48	72.7	53.1	1	0
Portland, east side, Multnomah county	75								87	9,11	40	3	47				
Forest Grove, Washington county	219						60.8		92	10	36	3	56	72.5	49.2	1	5
Newberg, Yamhill county	400						62.7		93	10	41	21	52	73.0	52.4	1	0
McMinnville, Yamhill county*	188	29.880	30.180	6	29.520	22	59.3	— 1.1	89	9,10	34	21	55		45.9		6
Miramonte Farm, Clackamas county	190						59.6		88	10	39	3	49	72.3	59.6	0	2
Hubbard, Marion county	210						59.2		88	8	32	2	56	72.5	45.9	0	5
Salem, Marion county																	
Mt. Angel, Marion county	150						61.0	— 0.8	88	10	38	21	50	73.2	48.8	0	3
Eola, Polk county	670						58.2	— 1.7	87	8	36	21	51	71.2	45.3	0	1
Corvallis, Benton county (5 miles N. of)	350						61.6		87	8	39	21	48	73.6	49.7	0	1
Corvallis, Benton county	319						59.4		90	8	34	21	56	73.5	45.3	1	6
Albany, Linn county*	225	29.85	30.120	6	29.55	22	61.2		90	8	38	2,3,21	52	74.4	48.1	1	4
Eugene, Lane county	435																
UMPQUA VALLEY—																	
Roseburg, Douglas county	523	29.992	30.214	6	29.714	27	62.4	-|- 1.2	91	9	41	3	50	74.4	50.5	1	0
ROGUE RIVER VALLEY—																	
Grants Pass, Josephine county	964																
Williams, Josephine county																	
Jacksonville, Jackson county	1665						61.0		91	9	35	3	56	76.8	45.1	1	6
Ashland, Jackson county	1940						62.6	— 0.2	92	9	40	20	52	77.3	47.8	1	1
							62.0	— 1.2	94	12	38	22,23	56	77.0	47.1	2	5
EASTERN OREGON—																	
Cascade Locks, Wasco county*	125	29.928	30.220	6	29.550	22	61.6		91	11	43	21	48	70.3	53.0	2	0
Hood River, Wasco county (5 miles S. of)	920	29.222	29.50	6	28.82	22	58.4		85	10	39	3	46	67.0	49.8	0	1
The Dalles, Wasco county	116	29.917	30.282	7	29.583	22	63.8	-|- 1.0	93	11	41	21	52	77.2	50.5	2	0
Bake Oven, Wasco county	2200						65.0		88	27	42	21	46				
Grass Valley, Sherman county																	
Lone Rock, Gilliam county	2000																
Arlington, Gilliam county							56.8	-|- 0.2	88	11	29	21	59	74.0	39.5	0	16
Olex, Gilliam county							66.4		91	11	42	21	49	79.7	53.1	3	0
Heppner, Morrow county																	
Hardman, Morrow county							62.2	-|- 1.1	88	11, 12, 27	36	21	52	76.1	48.2	0	3
Pendleton, Umatilla county	1122																
Weston, Umatilla county	1800						60.7	— 0.7	95	12	31	3,22	64	81.6	39.8	6	17
Walla Walla, Wash.	1018	29.964	30.264	7	29.643	22	66.6	-|- 4.0	91	27	45	22	46	78.6	54.6	1	0
Spokane Falls, Wash.	1909	29.98	30.27	7	29.60	22	60.4	-|- 2.2	86	11	36	22	50	73.9	47.0	0	1
Joseph, Wallowa county	4400						56.4		83	12,13	30	22	53	70.7	42.8	0	11
La Grande, Union county	2781																
Sparta, Union county	4125						61.4		88	10	35	21	53	76.9	46.0	0	6
New Bridge, Union county	2000						65.1		91	8,15	34	21	60	87.1	43.7	4	12
Baker City, Baker county	3440	29.958	30.201	7	29.687	28	58.9	-|- 2.1	88	14	30	22	58	71.7	43.1	0	10
Vale, Malheur county	4400						60.6		88	9	32	3	56	79.9	41.4	0	11
Beulah, Malheur county	4450						57.8	— 0.5	92	9,10	26	3	66	79.6	35.9	6	28
Burns, Harney county	4000						55.8		90	9,10	22	21	68	74.9	36.8	4	23
Happy Valley, Harney county†	4200						57.8	-|- 1.2	92	13	32	18	60	76.2	39.3	2	14
Wagner, Grant county							62.8		92	9	35	20,21	57	79.3	46.3	5	4
John Day Junction, Grant county	1600																
Canyon City, Grant county	3000						65.9		102	12	38	22,23	61	85.2	46.6	14	3
Crook, Crook county							57.4		90	11	29	23	61	75.4	39.3	1	18
Fife, Crook county																	
Silver Lake, Lake county	4300										34	17			43.1		11
Lakeview, Lake county	5060																
Bonanza, Klamath county																	

District, station, and county.	Precipitation: Rain, melted snow, sleet, and hail, in inches and hundredths. Total precipitation	Departure (plus or minus) from the average	Total from July 1, 1892, to September 30, 1892, inclusive	Average from July 1 to September 30	Departure (plus or minus) from the average	Total depth of melted snow, fall, in inches and tenths	Winds: Velocity in miles. Total movement in miles during month	Average hourly velocity for month	Maximum velocity. Miles per hour	Direction from	Date	Prevailing direction	Number of days— On which one-hundredth of an inch or more of rain fell	Cloudy	Partly cloudy	Cloudless	Number of— Hail storms	Thunder storms	Solar halos	Lunar halos	Light frosts	Killing frosts	Names of observers.
COAST—																							
Fort Canby, Wash.	4.00	-|- 1.05	7.24	5.85	-|- 1.39	0	8182	11.4	60	S	Sept. 25	S	10	20	1	6							E. H. Thompson.‡
Astoria, Clatsop county	4.21	-|- 1.00	7.53	5.98	-|- 1.55	0						SW	12	15	5	10							John Grover.‡
Tillamook Rock Lighthouse (in ocean)	3.20		6.52			0						SE	12	17	8	5							Keeper U. S. Lighthouse.
Glenora, Tillamook county	10.27		13.86			0						W	11	7	6	17		1					Mrs. Jennie A. Recher.
Toledo, Benton county	1.82		1.92			0						N	4	4	7	19							Dr. H. W. Vincent.
Newport, Benton county	1.54		2.12			0						SW	7	9	13	8		1					Capt. J. E. Mathews.
Bandon, Coos county	1.30	— 0.49	2.39	3.39	— 1.01	0						NW	8	8	10	12					1		George Bennett.
Langlois, Curry county	2.06		3.01			0						SW	7	6	19	5							Samuel T. Malehorn.
WILLAMETTE VALLEY—																							
Olympia, Wash.	3.49	-|- 0.58	5.18			0	5636	2.3	18	SW	20	S	8	9	8	13							Wm. Bell.‡
Vernonia, Columbia county	3.07		4.48	1.00	-|- 3.18	0						SW	9	4	18	8		1			2		G. W. Dallas.
Portland, Multnomah county	1.63	— 0.12	2.50	2.99	— 0.49	0	3706	5.1	34	S	22	N	4	6	12	12							B. S. Pague.‡
Portland, east side, Multnomah county	1.89		2.37	1.79	-|- 0.58	0						N	1	9	10	11	1		2				George Wigg, M. D.
Forest Grove, Washington county	2.62		3.34			0						SW	6	5	10	15							Pacific University (D. H. Thomas).
Newberg, Yamhill county	2.00		2.76			0						N	5	9	4	17							Edmund Robinson.
McMinnville, Yamhill county*	2.14	-|- 1.12	2.91	1.78	-|- 1.16	0						W	6	2	16	12							Capt. Wyatt Harris.
Miramonte Farm, Clackamas county	1.52		2.42			0						SW	6	8	2	20		1					A. C. Menecke.
Hubbard, Marion county	1.29		2.39			0						S	5	13	6	11		1			1		W. H. Goudy.
Salem, Marion county																							
Mt. Angel, Marion county	1.83	-|- 0.15	2.61	1.61	-|- 2.00	0						S, SW	8	8	10	12							Rev. Dr. Urban Fisher, O. S. B.
Eola, Polk county	1.81	-|- 0.21	2.18	2.59	-|- 0.11	0						NW	6	13	5	12							Thomas Pearce.
Corvallis, Benton county (5 miles N. of)	1.78		2.57			0						NW	5	9	4	17							E. Bicknell.
Corvallis, Benton county	1.68		2.13			0						W	4	6	18	6							Oregon Agricultural College.
Albany, Linn county*	1.94	-|- 0.20	2.69	3.11	-|- 0.42	0						N	6	10	6	14							John Briggs.
Eugene, Lane county	1.25		1.83	3.00	-|- 1.17								4										University of Oregon (S. E. McClure).
UMPQUA VALLEY—																							
Roseburg, Douglas county	0.99	-|- 0.26	1.42	1.72	— 0.30	0	2131	3.0	19	SW	5	N	7	7	5	18							Thomas Gibson.‡
ROGUE RIVER VALLEY—																							
Grants Pass, Josephine county																							
Williams, Josephine county																							
Jacksonville, Jackson county	0.53		0.53			0						N	2	7	3	20							W. C. Stites.
Ashland, Jackson county	0.58	— 0.32	0.58	1.28	— 0.70	0							3	4	5	21							E. Britt.
	0.31	— 0.30	0.31	1.62	— 1.31	0						NW	4	3	6	21							F. H. Carter.
EASTERN OREGON—																							
Cascade Locks, Wasco county*	2.44		3.32	5.29	— 1.97	0						W	5	8	14	8							Engineer Corps, U. S. Army.
Hood River, Wasco county (5 miles S. of)	0.90		1.28	1.82	— 0.53	0						W	5	6	6	18							Dr. P. G. Barrett.
The Dalles, Wasco county	0.11	— 0.29	0.41	0.88	— 0.47	0						W	2	6	4	20							Samuel L. Brooks.
Bake Oven, Wasco county	0.32					0						W	2	8	2	20							K. N. Staehr.
Grass Valley, Sherman county																							
Lone Rock, Gilliam county																							
Arlington, Gilliam county	0.56	-|- 0.27	1.05			0						SW NW	5	10	0	20							L. A. Miller.
Olex, Gilliam county	0.12		0.29			0						W	2	3	9	18							J. W. Smith.
Heppner, Morrow county																							
Hardman, Morrow county	0.18	— 0.02	0.77	0.71	-|- 0.06	0						SW	4	5	4	21		1			2		Arthur Smith.
Pendleton, Umatilla county																							
Weston, Umatilla county	0.35	-|- 0.08	0.51	0.42	-|- 0.09	0						SW	4	4	21	5					1	1	J. H. Zahner.
Walla Walla, Wash.	0.71	-|- 0.09	1.31	1.93	— 0.62	0	3574	5.0	38	S	23	S	7	7	6	17							F. Newman.‡
Spokane Falls, Wash.	0.35	— 0.59	0.90	2.63	— 1.73	0	3585	5.0	30	S	23	S	5	2	11	17					1		Charles Stewart.‡
Joseph, Wallowa county	0.73		1.05			0						S	4	11	8	11					2	1	J. D. McCully.
La Grande, Union county																							
Sparta, Union county	0.41		0.62			0						W	5	7	5	18						1	Hon. J. A. Wright.
New Bridge, Union county	0.13		0.15			0						W	6	9	16	5		1					H. J. Fuller, M. D.
Baker City, Baker county	0.16		0.19	0.82	— 0.63	0	3818	5.3	24	S	8	SE	2	8	5	15						1	C. H. Stuller.‡
Vale, Malheur county	0.37		0.49			0						SW	2	3	13	14					4		Finley McDonald.
Beulah, Malheur county	0.22		0.22			0						SW	1	7	5	18							T. L. Arnold.
Burns, Harney county	0.75		0.76			0						W	2	5	8	17							W. C. Byrd.
Happy Valley, Harney county†	0.77		1.16			0						SW	7	5	3	13							J. H. Neal.
Wagner, Grant county	0.50		0.67			0						N	5	8	9	13							Miss Lavina Wagner.
John Day Junction, Grant county																							
Canyon City, Grant county	0.90		1.17			0						W	5	7	11	12							E. S. Penfield.
Crook, Crook county	0.72		1.18			0						S	3	11	5	11			3	1		2	W. B. Emmons.
Fife, Crook county																							
Silver Lake, Lake county	1.51	-|- 1.07	1.59	1.37	-|- 0.22	0						S	6	10	11	9		3					A. Y. Beach.
Lakeview, Lake county	1.00		1.10										2										J. O. Humaker.
Bonanza, Klamath county																							

* Actual barometer readings.

Figures in the minimum temperature column preceded by the minus (-) sign indicate below zero.

† Record from 10th to close of month.

TABLE NO. 2.

PRECIPITATION TABLE: Total daily amount of precipitation, including rain, hail, sleet, and melted snow, with total for month on right of total daily. The precipitation is recorded in inches and hundredths. For the month of September, 1892. † indicates trace or sprinkle.

District and station.	*September, 1892.*																													*Number of days on which rain, melted snow, sleet or hail fell.*						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	*Total for month.*	*Less than .01 of an inch.*	*.01 to .10*	*.11 to .25*	*.26 to .50*	*.51 to 1.00*	*Over 1 inch.*	*Total No. of days.*
COAST—																																						
Fort Canby, Wash					.13	.11								†					.08	.58	†	2.24	.29	.49	.04	.03			.01			4.00	2	4	2	2	1	1	12
Astoria					.25	.10												.01	.01	.65	.05	2.10	.43	.44	.09	.09			.02			4.24	0	7	1	2	1	1	12
Tillamook Rock L. H. (in ocean)						.16	.02		.01			.01							.05	.11	.69	.61	.77	.67	.04	.06						3.20	0	6	2	0	4	0	12
Glenora					.13	.50												.07	.03	.56	.65	5.58	1.78	1.15	.29	.03						10.77	0	3	1	2	2	3	11
Toledo					.05															.10		.97	.70	†							1.82	1	2	0	0	2	0	5
Newport						.04												.01			.35	.23	.40	.49		.02						1.54	0	3	1	3	0	0	7
Gardiner																																						
Bandon					.01									.02				.43	.01	.03		.20	.48	.12								1.30	0	4	2	2	0	0	8
Langlois						.20											.08	.43	.09			.71	.25	.30								2.06	0	2	2	2	1	0	7
WILLAMETTE VALLEY—																																						
Olympia					†	.10									†					.19	.03	2.08	.47	.44	.16	.02						3.49	2	3	2	2	0	1	10
Vernonia					.05	.04									.06		.01	.04		.22		2.00	.39	.26								3.07	0	5	1	2	0	1	9
Portland																	†	†	†	.13		.53	.70	.27								1.63	3	0	1	1	2	0	7
East Portland																																1.89							4
Portland, "Piedmont"																																						
Forest Grove						†											.55		.05		.05	.60	1.10	.47	†						2.62	2	2	0	2	1	1	8
Newberg																				.12	.08	1.31	.29	.20								2.00	0	1	2	1	1	1	5
McMinnville																		.01		.08	.10	1.38	.33	.21								2.14	0	3	1	1	1	0	6
Hubbard																		†	.06	.16		.23	.63	.21								1.29	1	1	3	1	0	0	6
Miramonte Farm						†													.12	.19	.04	.51	.48	.18								1.52	1	1	3	1	1	0	7
Salem																																						
Mount Angel					.01	.01												.18	.02	.18	.12	.86	.51	†								1.89	1	3	3	0	2	0	9
Eola													.02							.26	.03	.97	.26	.27								1.81	0	2	0	3	1	0	6
Corvallis																			.20	.10	.80	.58										1.68	0	1	1	0	2	0	4
Corvallis, 5 miles north of														†				†	.14	.17		.52	.44	.51								1.78	2	0	2	1	2	0	7
Albany																		†	.07	.31	.05	.80	.30	.31								1.94	1	1	1	3	1	0	7
Eugene					†													.20			.19	.51	.35	†								1.25	2	0	2	1	1	0	6
UMPQUA VALLEY—																																						
Roseburg																		.29	.17	.09	.08	.01	.30	.05								3.99	0	5	1	1	0	0	7
ROGUE RIVER VALLEY—																																						
Grants Pass													.02					.50	.23	.18	.02		.09									1.04	0	3	2	1	0	0	6
Williams																		.40			.13											0.53	0	0	1	1	0	0	2
Jacksonville																	†	.48	†	.05		.05									†	0.58	3	2	0	1	0	0	6
Ashland														†				.13	.14		.01		.03									0.31	1	2	2	0	0	0	5
UPPER COLUMBIA RIVER BASIN AND EASTERN OREGON—																																						
Cascade Locks						.01														.35		.61	.65	.82								2.44	0	1	0	1	3		
Hood River, 5 miles south of					†	†													.05	†	.06	.15	.55	.10								0.90	3	3	1	0	1	0	8
The Dalles																			†	†		.13	.01									0.14	2	1	1	0	0	0	4
Bake Oven																		.15	.17													0.17	0	0	2	0	0	0	2
Grass Valley																																						
Lone Rock																		.05		.05		.01	.23	.22								0.56	0	3	2	0	0	0	5
Olex																																						
Arlington																				.01		.08										0.12	0	2	0	0	0	0	2
Heppner																		†	.05	.11			.23	.06								0.48	1	2	2	0	0	0	5
Hardman																																						
Gooseberry																																						
Pendleton																			.08	.03			.14	.10								0.35	0	3	1	0	0	0	4
Weston																																						
Walla Walla, Wash																			.04	.11	.22	.06	.08	.16								0.71	0	4	3	0	0	0	7
Spokane Falls, Wash																	.03		.04	.11	.04	.08	.15	.05								0.55	2	4	1	0	0	0	7
Joseph																		.03	†	†	.04	.08							†	†		0.73	2	1	3	0	0	0	6
La Grande																	.21		.19	.10		.23										0.72	2	0	2	0	0	0	4
Sparta																				†	.01	.32	†									0.44	4	3	2	0	0	0	9
New Bridge																	†	†	.03	.06	†	.15	.16						.04	†		0.43	0	6	0	0	0	0	6
Baker City																			.01	.05	.02	.01	.03	.01								0.16	3	2	0	0	0	0	5
Vale																		†	.06		.10	†								†		0.37	2	0	2	0	0	0	4
Beulah																		†			.15	†	.22									0.22	2	0	1	0	0	0	3
Burns																					†		.22	†								0.75	0	0	0	2	0	0	2
Happy Valley																		.30					.45									0.77	0	5	1	1	0	0	7
Wagner																	.02	.10	.06		.20	.02	.30							.07		0.50	0	4	1	0	0	0	5
John Day Junction																		.08	.10	.08	.07		.17									0.90	0	3	0	2	0	0	5
Canyon City																		.08	.30	.34			.10	.10								0.72	2	2	0	1	0	0	5
Crook																		.57	.07	.08	†		†									1.36	1	2	1	1	1	0	6
Fife																		.72	.32	.15			.03						†	.04								
Silver Lake																																						
Lakeview	.24																																					
Paisley																	†	.81	†	.09	.19		†						1	.08	.10	1.51	4	3	2	0	1	0	10
Bonanza																																						